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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,313	01/22/2004	Chahee Peter Cho	57357-074	3098
26633	7590	01/25/2006	EXAMINER	
HELLER EHRMAN WHITE & MCAULIFFE LLP 1717 RHODE ISLAND AVE, NW WASHINGTON, DC 20036-3001			DUDA, RINA I	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/761,313	Applicant(s) CHO ET AL.	
	Examiner Rina I. Duda	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14 and 18 is/are allowed.
- 6) ☒ Claim(s) 15-17 and 19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/1/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10/24/05 have been fully considered but they are not persuasive. In reference to applicant's argument that the applied prior art does not teach a battery voltage sensor for sensing the battery voltage, attention is directed to column 4 lines 32-36 where Kuang describes that control means 32 measures the current delivered by the battery and the voltage at which the current is being delivered and computes the battery state of charge (SOC is used to monitor the voltage of a battery). The claimed language does not exclude any other variable for being used as long as a voltage sensor output is being used to control the operation of the range extender. Therefore, the rejection of claims 15-17 and 19-24 stands.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 15-17 and 19-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuang (US patent 5264764).

Claims 15, 19, 22, and 23 Kuang teaches a method/controller for operating a range extender for a electric vehicle comprising means 32 for sensing the voltage of battery 30 and means 24 for responding to the sensed voltage, means 24 will operate machine 28 as a motor if the sensed voltage is under 35% of the battery full charge in

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order to bring the engine to an operating maximum speed and once the engine reaches a predetermined speed value means 24 will operate machine 28 as a generator.

Claims 16 and 21, Kuang describes for example in column 4 how the range extender goes through an initiation phase for about 3 minutes before reacting to a requested power.

Claims 17, 20, and 24, Kuang describes means 24 for turning off the engine when the sensed battery voltage reaches a second value 45% of the battery full charge.

Allowable Subject Matter

4. Claims 1-14 and 18 are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter: The prior art made of record does not teach a system for controlling a range extender for an electric vehicle comprising a controller for controlling operation of the range extender independently of the vehicle controller, wherein the controller activates or deactivates the range extender based on the voltage sensed across a battery. Furthermore, the prior art does not teach a range extender system including a mode selection circuit for selecting between an automatic operating mode and a manual operating mode and a controller for controlling operation of the range extender independently of the operation of the traction motor in an electric vehicle.

Conclusion


6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rina I. Duda whose telephone number is 571-272-2062.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached 571-272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


RINA DUDA
PRIMARY EXAMINER